

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

BRV-39291

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Application Number

10/562,748

Filed

December 29, 2005

First Named Inventor

Jerome Delamare

Art Unit

2832

Examiner

Ramon Barrera

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)☐ attorney or agent of record.
Registration number _____☒ attorney or agent acting under 37 CFR 1.34.Registration number if acting under 37 CFR 1.34 57,076

Brad C. Spencer
Signature

Brad C. Spencer

Typed or printed name

216/579-1700

Telephone number

December 24, 2008

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	:	10/562,748	Filed: December 29, 2005
Applicant	:	Jerome Delamare, et al.	
Title	:	LEVITATION MAGNETIC ACTUATOR	
Conf. No.	:	7709	TC/A.U.: 2832
Examiner	:	Ramon M. Barrera	Docket No.: BRV-39291
Customer No.:	:	00116	

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicants request a pre-appeal brief conference for review of the final rejection in the above-identified application. The final rejection is set forth in the Office action of June 26, 2008. The three-month period for responding to the Office action expired on September 26, 2008. Applicants previously requested and paid for a two-month extension of time (i.e., through November 26, 2008) in a response dated November 18, 2008. Applicants now request and petition that the period for responding to the outstanding Office action be extended for an additional month, through December 26, 2008.

Please charge \$1,160 to our Deposit Account No. 16-0820, our Order No. BRV-39291 for the \$620 extension of time fee and the \$540 fee for filing a notice of appeal.

A Notice of Appeal is enclosed.

REMARKS/ARGUMENTS

The following arguments and remarks are provided in support of this pre-appeal brief request for review. Claims 1-8, 18 and 29 were rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2828000 in view of Uozumi (4,798,488) or Mohler (4,812,884). Claim 1 recites:

“the mobile magnetic portion (20) includes a magnet-based part (200) with reduced magnet weight, this part (200) having an overall volume, and a mass, the mass of the reduced magnet weight part is less than the mass of a part having the same overall volume and whose overall volume is totally occupied by the magnet.”

Uozumi teaches a print head. The object of Uozumi is to provide high speed printing (see column 2, lines 6-8: “a primary object of this invention is to provide a dot matrix print head which is capable of high speed printing...”). This object is accomplished through a weight-reducing groove 14 located in a region of an armature where the density of magnetic flux is relative small. This feature appears at least five times in Uozumi, including claims 1 and 3: see abstract (“the mass of the armature is reduced by providing a groove in the armature in the portion where the magnetic flux density is relatively low”); see column 2, lines 27-30 (“the armature is reduced in weight by having a portion thereof removed in the region where the density of magnetic flux is relatively small”); see column 3, lines 61-68 (“because the groove 14 occupies the portion of the armature 4 where the magnetic flux density would be low even when the groove 14 were not present..., the magnetic flux passing through the armature 4 is not substantially affected by presence of this groove 14”); see claim 1 (“the armature having an open cavity therein in the region where the density of magnetic flux is relatively small”); and see claim 3 (“the armature is reduced in mass by having a portion thereof removed in the region with the density of magnetic flux is relatively small, said removed portion comprising a groove”). In the noted passages of Uozumi, the groove reduces the weight of the armature, but the groove is always associated with a region of low magnetic flux density. Reducing armature weight where the magnetic flux density is relatively small, and not in some other location, is an essential

feature of Uozumi. Thus the magnetic flux passing through the armature is not significantly affected by the presence of the groove.

The Office action, at page 4, mischaracterizes the general teaching of Uozumi as merely reducing armature mass. However, as shown above, the general teaching of Uozumi is mass reduction in a specific location in which the magnetic flux density is low.

In FR 2828000 the magnetic flux density is uniform in the mobile magnetic portion, and there is no place where the magnetic flux density is relative weak or small (as taught by Uozumi). A person of ordinary skill in the art that desires to make a magnetic actuator having a reduced switching time would not modify the teaching of FR 2828000 based on Uozumi, because he would be unable to find a low magnetic flux density region in the FR 2828000 mobile magnetic portion in which to locate a weight-reducing groove (as taught by Uozumi). The general teaching of Uozumi, i.e., reducing the weight of an armature in a portion where the magnetic flux density is relatively low, cannot be applied to the mobile magnetic portion of FR 2828000. Because Uozumi's disclosed technique cannot be applied to the mobile magnetic portion of FR 2828000, the person of ordinary skill in the art would not modify the teaching of FR2828000 based on Uozumi to arrive at the claimed invention.

Claim 1 recites, "the mass of the reduced magnet weight part is less than the mass of a part having the same overall volume and whose overall volume is totally occupied by the magnet." In the subject matter of claim 1, the mass of a magnet-based part is reduced while maintaining volume. As compared to a part having the same overall volume but totally occupied by the magnet, the reduced magnet weight part has less mass. Contrary to claim 1, Mohler reduces the weight of its armature 16' by *reducing* volume. Therefore, applicants submit that Mohler does not teach that the mass of a reduced magnet weight part is less than the mass of a part having the same overall volume and whose overall volume is totally occupied by the magnet.

Further, Mohler removes a portion on the side opposite to an attraction area 20. The removed portion is located in a place of low armature flux when compared with a central core 18 of the armature. Mohler teaches that the armature is of a reduced thickness of permeable material in all regions except the immediate vicinity of the air gaps so as to reduce its inertia but

maintain the air gap generated attractive force (2:63-67). In FR 2828000 the magnetic flux density is uniform in the mobile magnetic portion, and there is no place where the magnetic flux density is relative low. A person of ordinary skill in the art that desires to make a magnetic actuator having a reduced switching time would not modify the teaching of FR 2828000 based on Mohler, because he would be unable to locate a low magnetic flux density region in the FR 2828000 mobile magnetic portion in which to reduce weight.

For the reasons discussed above, and in view of the differences between the claimed subject matter and the cited references, applicants submit that the current rejection of claim 1 under 35 U.S.C. 103(a) is improper and request that the rejection be withdrawn. Claims 2-8 and 18 depend from claim 1. The arguments provided above with respect to claim 1 are also applicable to claim 29. Applicants request that the rejection of claims 2-8, 18 and 29 also be withdrawn.

Claim 19 was rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2828000 in view of Uozumi or Mohler and further in view of Uetsuhara. Claim 19 depends from claim 1 and the arguments provided above with respect to claim 1 also apply to claim 19. Applicants request that the rejection of claim 19 be withdrawn.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, Applicants request notification setting a date for filing an appeal brief. If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. BRV-39291.

Respectfully submitted,
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